Title (en)

Non-volatile memory memory arrays and methods of operating thereof

Title (de)

Nichtflüchtige Speicherzellen, Speicherarrays damit und Verfahren zum Betrieb der Zellen und Arrays

Title (fr)

Cellules de mémoire non volatile, réseau de mémoire comportant celles-ci et procédés de fonctionnement des cellules et des réseaux

Publication

**EP 2320426 B1 20120523 (EN)**

Application

**EP 10184084 A 20060103**

Priority

- EP 06000064 A 20060103
- US 64022905 P 20050103

Abstract (en)

[origin: EP1677311A1] Memory cells comprising: a semiconductor substrate having a source region and a drain region disposed below a surface of the substrate and separated by a channel region; a tunnel dielectric structure disposed above the channel region, the tunnel dielectric structure comprising at least one layer having a small hole-tunnelling-barrier height; a charge storage layer disposed above the tunnel dielectric structure; an insulating layer disposed above the charge storage layer; and a gate electrode disposed above the insulating layer are described along with arrays thereof and methods of operation. For example, the tunnel dielectric structure could be an ONO (oxide/nitride/oxide) layer with the nitride layer having the small hole-tunnelling-barrier height. Together with a nitride layer as storage layer, an ONONO structure is provided.

IPC 8 full level

**G11C 16/04** (2006.01); **H10B 20/00** (2023.01); **H10B 69/00** (2023.01)

CPC (source: EP)

**G11C 16/0466** (2013.01); **H10B 43/30** (2023.02); **H10B 69/00** (2023.02)

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DOCDB simple family (application)

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